Use of Electronic Analog Computers (Cont.)   SOV/2201

The book makes use of the results of a number of electronic analog computers
of the EMU type, developed by the author and his colleagues at the {Institut
avtomatiki i telemekhaniki (Institute of Autmation and Telemechanics--IAT)
of the Academy of Sciences, USSR, and also the material from a course on
analoging of automatic control systems given by the author from 1950 to 1956
at the MVTU and IAT for scientific coworkers and at the Moscow Physico-
Technical Institute. The author thanks A. A. Fel'dbaum, Ya. Z. Tsypkin,
I. M. Tetel'baum, L.V. Yamshanov, V. A. Trapeznikov and his colleagues at
the IAT, Y. Ye. Traninyy, V. V. Churovyy, A. A. Maslovyy, and T. V. Pritullo
for their aid in preparing the book. There are 186 references: 119 Soviet,
60 English, 4 French, 2 German and 1 Spanish.

TABLE OF CONTENTS:

Card 2/8

ALEKPEROV, V.P., insh.; ATOVMYAN, I.O., insh.; ZUIEV, V.I., insh.; KAVUN,
Ye.S., kand.tekhn.nauk; KOGAN, B.Ya., kand.tekhn.nauk; KOPAY-GORA,
P.N., kand.tekhn.nauk; KULAKOV, A.A., insh.; LEBEDEV, A.N., kand.
tekhn.nauk; PAPERNOV, A.A., doktor tekhn.nauk; PEL'POR, D.S.,
doktor tekhn.nauk; PLOTNIKOV, V.N., kand.tekhn.nauk; RUZSKIY,
Yu.Ye., kand.tekhn.nauk; SOLODOVNIKOV, V.V., doktor tekhn.nauk;
TOPCHEYEV, Yu.I., kand.tekhn.nauk; ULANOV, G.M., kand.tekhn.nauk;
SHRAMKO, L.S., kand.tekhn.nauk; DOBROGURSKIY, S.O., doktor tekhn.
nauk, retsenzent; KAZAKOV, V.A., kand.tekhn.nauk, retsenzent;
PETROV, V.V., kand.tekhn.nauk, retsenzent; KHAVKIN, G.A., insh.,
retsenzent; SOLODOVNIKOV, V.V., prof., doktor tekhn.nauk, red.;
VITENBERG, I.M., kand.tekhn.nauk, nauchnyy red.; MOLDAVER, A.I.,
kand.tekhn.nauk, nauchnyy red.; KHETAGUROV, Ya.A., kand.tekhn.nauk,
nauchnyy red.; POLYAKOV, G.F., red.izd-va; KONOVALOV, G.M., red.
izd-va; SOKOLOVA, T.F., tekhn.red.

[Fundamentals of automatic control] Osnovy avtomaticheskogo reguli-
rovaniia. Vol.2. [Elements of automatic control systems] Elementy
sistem avtomaticheskogo regulirovaniia. Pt 2. [Compensating
elements and computer components] Korrektiruiushchie elementy i
elementy vychislitel'nykh mashin. Moskva, Gos.nauchno-tekhn.
izd-vo mashinostroit.lit-ry. 1959. 453 p.   (MIRA 12:4)
  (Automatic control)   (Electronic apparatus and appliances)
            (Electronic calculating machines)

KOGAN, B. YA.

S/024/60/000/04/002/013
E140/E463 82206

16.6800

AUTHOR: Kogan, B.Ya, (Moscow)

TITLE: On the Reproduction of Nuclear Reactor Starting
Processes on Electronic Analogue Computers

TEXT: In the modelling of starting processes in nuclear reactors
the dynamic range required for the parameters expressing the
neutron flux and the concentration of nuclei radiating slow neutrons
may be 10^{10}. However, the usual dynamic range for electronic
analogue computers is only 10^3.   The author describes two methods
for overcoming this difficulty: division of the range of variation
of the parameters into subranges of convenient variation,
e.g. 10 : 1, with automatic passage from one range to the next or
transformation of the equations of the system to permit logarithmic
representation of the parameters in question.   The two methods
are examined in some detail, questions of relay circuits for the
automatic range switching being given particular attention, and
the relative errors of the methods estimated.   It is concluded
that despite the more complex circuits required the range-switching

Card 1/2

16.6800,16.9500

77479
SOV/103-21-1-10/22

AUTHOR: Kogan, B. Ya. (Moscow)

TITLE: On Methods of Modeling of Fractionally Rational
                  Transfer Functions Without Using Differentiating
                  Elements

PERIODICAL: Avtomatika i telemekhanika 1960, Vol 21, Nr 1, pp
                  72-81 (USSR)

ABSTRACT: In the study methods are compared of modeling frac-
                  tionally rational transient functions without making
                  use of differentiating elements. The transfer func-
                  tions are considered with constant and variable coeffi-
                  cients of the initial differential equations. The
                  following four methods of modeling are compared using
                  only the integrating and summating elements: (1) the
                  direct integration; (2) the splitting of the transfer
                  function into the simple forms (method of structural
Card 1/18   transformation); (3) the resolving into equations of
                  the first order; (4) the combining of derivatives.

On Methods of Modeling of Fractionally
Rational Transfer Functions Without Using
Differentiating Elements

77479
SOV/103-21-1-10/22

(1) Method of direct integration. This method is
explained on the following equation:

$$a_3 y''' + a_2 y'' + a_1 y' + a_0 y = b_0 x + b_1 x' + b_2 x'' + b_3 x'''$$

where a_0, a_1, a_2, a_3 and b_0, b_1, b_2, b_3 are given constant
coefficients, $y(0)$, $y'(0)$, $y''(0)$ are initial conditions
and x is perturbation dependence of which on time is
not given. This equation is transformed into:

$$y = -\frac{1}{p}(a_2 y - b_2 x) - \frac{1}{p^2}(a_1 y - b_1 x) - \frac{1}{p^3}(a_0 y - b_0 x) + b_3 x - (a_3 - 1) y. \quad (3)$$

Denoting the sum of the terms which contain the
symbols of integration by z_1 the following equation
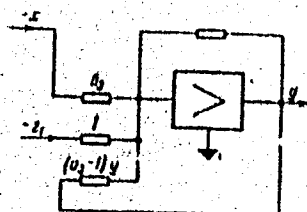is obtained:

Card 2/18

On Methods of Modeling of Fractionally
Rational Transfer Functions Without Using
Differentiating Elements

77479
SOV/103-21-1-10/22

$$y = z_i + b_3 x - (a_3 - 1) y. \qquad (4)$$

The quantity y may be modeled by a summator shown on
Fig. 1, in accordance with Eq. (4):

Card 3/18   Fig. 1.

On Methods of Modeling of Fractionally
Rational Transfer Functions Without Using   77479
Differentiating Elements   SOV/103-21-1-10/22

Then the derivative pz_1 is determined as:

$$pz_1 = -(a_1 y - b_2 x) + z_2,$$

where

$$z_2 = -\frac{1}{p}(a_1 y - b_1 x) - \frac{1}{p^2}(a_0 y - b_0 x)$$

One integrator must be added to the set-up of component
elements. Figure 2 shows the entire block diagram of
the set-up. The main advantage of this method is that
the set-up is made according to the initial coeffi-
cients, and the initial conditions may be easily
determined. (2) Splitting the transfer function into
simple forms. This is based on the assumption that any
transfer function $W(s)$ may be considered as a transfer
function of a certain single loop system with negative

Card 4/18

On Methods of Modeling of Fractionally
Rational Transfer Functions Without Using
Differentiating Elements

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SOV/103-21-1-10/22
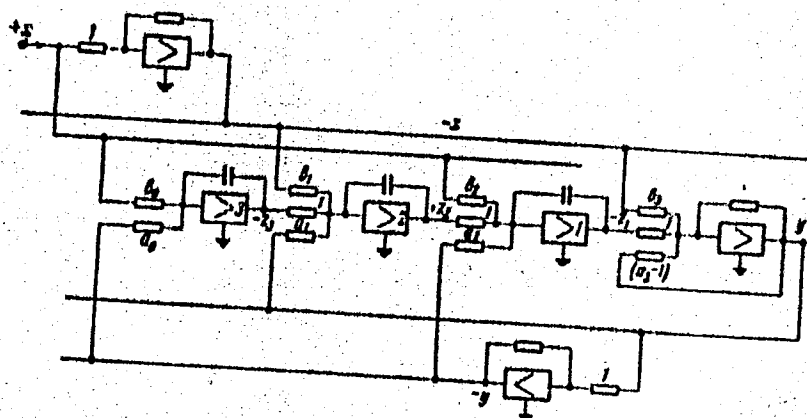
Card 5/18   Fig. 2.

On Methods of Modeling of Fractionally
Rational Transfer Functions Without Using
Differentiating Elements

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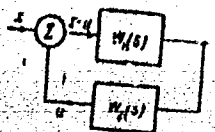SOV/103-21-1-10/22

feedback, as shown on Fig. 3.

Fig. 3.

For this system the transfer function W(s) is deter-
mined as follows:

$$W(s) = \frac{H(s)}{P(s)} = \frac{W_1(s)}{1 + W_1(s) W_2(s)} \cdot \qquad (8)$$

Card 6/18   where some limitations are imposed on W_1 and W_2.

On Methods of Modeling of Fractionally
Rational Transfer Functions Without Using
Differentiating Elements

77479
SOV/103-21-1-10/22

This method is illustrated by an example when $R(s) =$
$= b_0 + b_1 s + b_2 s^2 + b_3 s^3$ and $P(s) = a_0 + a_1 s + a_2 s^2 +$
$+ s^3$; The modeling problem reduces to making the set
up corresponding to the following set of equations:

$$y = \frac{1}{T_0}(x-u),$$
$$(n_0 + n_1 s) u = y - u_1,$$
$$(q_0 + q_1 s) u_1 = u - u_2,$$
$$(c_0 + c_1 s) u_2 = r_0 u_1.$$

(13)

Corresponding to this set of equations, the block dia-
grams of the system and of the set-up are shown on
Figs. 4 and 5, respectively. This method requires a
larger number of inverters in comparison with the
method of direct integration. The calculation of
coefficients of transformed equations requires much
time. (3) Resolving the initial nonhomogeneous

Card 7/18

On Methods of Modeling of Fractionally
Rational Transfer Functions Without Using
Differentiating Elements

77479
SOV/103-21-1-10/22
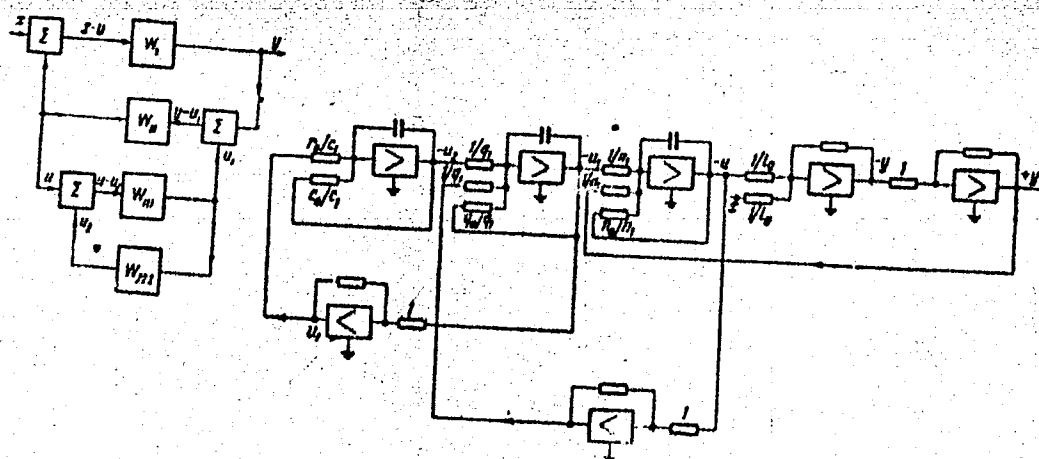
Card 8/18   Fig. 5.

On Methods of Modeling of Fractionally
Rational Transfer Functions Without Using
Differentiating Elements

77479
SOV/103-21-1-10/22

equation of n-th order into a system of n nonhomogeneous
equations of the first order. One of the many well
known methods is outlined. The linear differential
equation with constant coefficients is given in the
form:*

$$\frac{d^n y}{dt^n} + a_{n-1}\frac{d^{n-1}y}{dt^{n-1}} + \ldots + a_1\frac{dy}{dt} + a_0 y =$$

$$= b_0 x + b_1\frac{dx}{dt} + \ldots + b_{n-1}\frac{d^{n-1}x}{dt^{n-1}} + b_n\frac{d^n x}{dt^n} \qquad (14)$$

This equation may be transformed into the following
system of linear differential equations of the first
order:

Card 9/18

On Methods of Modeling of Fractionally
Rational Transfer Functions Without Using
Differentiating Elements

77479
SOV/103-21-1-10/22

$$y = y_1 + a_n x,$$

$$\frac{dy_1}{dt} = y_2 + \alpha_{n-1} x.$$

$$\cdots\cdots\cdots$$

$$\frac{dy_{n-1}}{dt} = y_n + \alpha_1 x,$$

$$\frac{dy_n}{dt} = -a_{n-1} y_n - a_{n-2} y_{n-1} - \ldots - a_1 y_2 - a_0 y_1 + \alpha_0 x.$$

(15)

The block diagram of the set-up is completed according
to this equation in the form shown on Fig. 6a. The
general number of blocks (n + 3) where n is the order
of the differential equation. As an example, the
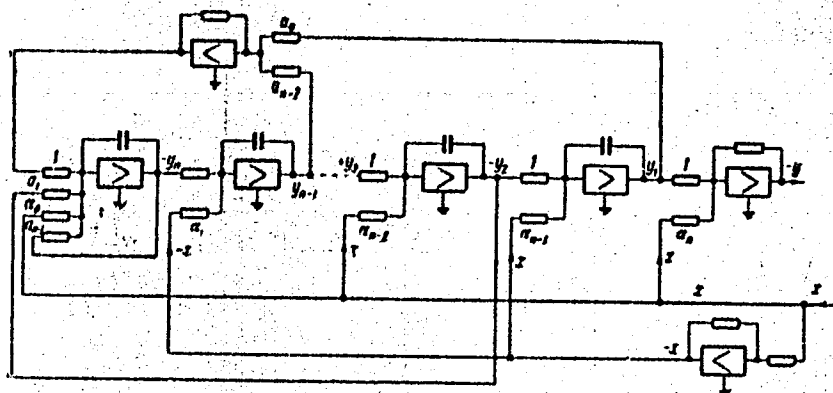reproduction is given of the transfer function

$$W(s) = \frac{s^2 - \frac{6}{\tau} s + \frac{12}{\tau^2}}{s^2 + \frac{6}{\tau} s + \frac{12}{\tau^2}},$$

Card 10/18

On Methods of Modeling of Fractionally
Rational Transfer Functions Without Using
Differentiating Elements

77479
SOV/103-21-1-10/22

Card 11/18   Fig. 6a.

On Methods of Modeling of Fractionally
Rational Transfer Functions Without Using
Differentiating Elements

77479
SOV/103-21-1-10/22

approximating the transfer function of a link element $e^{-s\,T}$ by means of the Pad series at $\gamma = \nu = 2$.
(4) Method of combining the derivatives. The initial equation is considered in the form of Eq. (14). Introducing a new variable u determined as

$$u = \frac{x}{p^n + a_{n-1}p^{n-1} + \ldots + a_1 p + a_0}.$$ (17)

the following resultant equation is obtained:

$$y = b_n \frac{d^n u}{dt^n} + b_{n-1} \frac{d^{n-1} u}{dt^{n-1}} + \ldots + b_1 \frac{du}{dt} + b_0 u.$$ (18)

Card 12/18

On Methods of Modeling of Fractionally
Rational Transfer Functions Without Using
Differentiating Elements

77479
SOV/103-21-1-10/22

Equation (17) can be rewritten in a differential form
as follows:

$$\frac{d^n u}{dt^n} + a_{n-1}\frac{d^{n-1} u}{dt^{n-1}} + \ldots + a_1 \frac{du}{dt} + a_0 u = x. \qquad (19)$$

In order to design the structural diagram, first, Eq.
(19) must be "set-up" according to the method of lower-
ing the order of the derivative. Then the looked for
variable y must be formed as a sum of u-derivatives
with corresponding coefficients. By solving Eq. (19),
the values of $d^i u/dt^i$ are obtained directly from the
corresponding outputs of integrators. The resultant
equations are given in the form:

Card 13/18

On Methods of Modeling of Fractionally
Rational Transfer Functions Without Using
Differentiating Elements

77479
SOV/103-21-1-10/22

$$\frac{d^n u}{dt^n} + a_{n-1}\frac{d^{n-1}u}{dt^{n-1}} + \ldots + a_1 \frac{du}{dt} + a_0 u = x,$$

$$y = (-b_n a_{n-1} + b_{n-1})\frac{d^{n-1}u}{dt^{n-1}} + \ldots + (-b_n a_1 + b_1)\frac{du}{dt} +$$

$$+ (-b_n a_0 + b_0)u + b_n x.$$

The structural diagram of the set-up corresponding to
these equations for m = n = 3 is shown on Fig. 7. In
the general case n + 3 blocks are required for the
set-up. (5) Methods of modeling the differential
equations with variable coefficients. In order to
design the set-up for the solution of differential
Eq. (14) with variable coefficients, the method of
direct integration, or the method of resolving into
the set of differential equations of the first order,
may be used. Using the first method, Eq. (14) is
replaced by an equivalent equation in the form:

Card 14/18

On Methods of Modeling of Fractionally   77479
Rational Transfer Functions Without Using   SOV/103-21-1-10/22
Differentiating Elements

Card 15/18   Fig. 7.

On Methods of Modeling of Fractionally   77479
Rational Transfer Functions Without Using   SOV/103-21-1-10/22
Differentiating Elements

$$\sum_{j=0}^{n} (-1)^{j} (\alpha_j \, y)^{(j)} = - \sum_{j=0}^{m} (-1)^{j} (\beta_i x)^{(j)}, \tag{20}$$

where y and x are the same variables as in Eq. (14) and
$\alpha_j(t)$, β_j (t) are new functions of time. Matyash
proved ("Programming of Linear Differential Equations
With Variable Coefficients for Solving by Means of
Modeling Calculating Machines," Programmirovanie
lineynykh differencial'nykh uravneniy s peremennyii
koeffitsientami dlya ikh resheniya pri pomoshchi
modeliruyuchchikh vychislitel'nykh mashin.) that the
new coefficients must be related to the old coefficienta
by means of the following equations:

$$\beta_{m-k} = \sum_{i=0}^{k} (-1)^{(m-i)} \frac{(m-i)!}{(m-k)!(k-i)!} b_{m-i}^{(k-i)} \quad (k=0,1,2,\ldots,m).$$

Card 16/18

$$\alpha_{n-k} = \sum_{i=0}^{k} (-1)^{n-i} \frac{(n-i)!}{(n-k)!(k-i)!} a_{n-i}^{(k-i)} \quad (k=0,1,2,\ldots,n).$$

On Methods of Modeling of Fractionally   77479
Rational Transfer Functions Without Using   SOV/103-21-1-10/22
Differentiating Elements

Using the second method, parameters $\alpha_n(t)$, $\alpha_{n-1}(t)$, ..., $\alpha_0(t)$ of the transformed equations must be considered as functions of time. The determination of these functions may be made from the initial variable coefficients by making use of the following recurrent equation:

$$\alpha_0(t) = b_0(t), \quad \alpha_i(t) = b_i(t) - \sum_{k=0}^{i-1} \sum_{r=0}^{i-k} \bar{c}_{n+r-i}^{n-i} \alpha_{i-k-r}(t) \frac{d^r q_k(t)}{dt^r}.$$

In the conclusions the author states that the minimum number of amplifiers for solutions in the set-up diagrams is n + 3, where n is the order of modeled differential equation. The most simple method from the point of view of preparation, is the method of combining the derivatives. For solution of differential equations with variable coefficients the

Card 17/18

On Methods of Modeling of Fractionally   77479
Rational Transfer Functions Without Using   SOV/103-21-1-10/22
Differentiating Elements

preference should be given to the method of transition
to the equivalent system of differential equations of
the first order, since this requires the minimum
auxiliary calculations. There are 7 figures; and 6
references, 5 Soviet, 1 U.S. The U.S. reference is:
Jonson, C. L. F. Analog Computer Techniques, McGraw-
Hill, 1956.

SUBMITTED: June 2, 1959

Card 18/18

S/103/60/021/012/007/007
B012/B064

AUTHORS: Vil'dt, Ye. O., Landsberg, R. S., Kogan, B. Ya.

TITLE: Bibliography. List of Publications on Problems of the
             Mathematical Simulating (on Analog Computers) of 1958

PERIODICAL: Avtomatika i telemekhanika, 1960, Vol. 21, No. 12,
             pp. 1629-1652

TEXT: Total number of articles published: 446. 10 books are listed.
Transactions of congresses and conferences, information: 18; general
theoretical problems: 72 (general problems: 43, methods of solving prob-
lems by means of analog computers: 18, accuracy of analog computers and
their elements: 11; analog computers with non-direct analogy: 181 (elec-
tronic devices: 45, computing elements of electronic devices: 92 (elec-
tronic direct-current amplifiers: 15, transistor computing amplifiers: 8,
integrating and differentiating devices: 8, multiplication and division
devices: 18, function generators: 34, other computing elements and
auxiliary equipment: 9), electromechanical devices: 11, air-pressure
hydraulic devices: 2, special devices: 31 (computers for solving systems

Card 1/2

S/024/61/000/006/012/019
E140/E335

9.3240

AUTHOR: Kogan, B. Ya.   (Moscow)

TITLE: On the bandwidth error of an operational amplifier

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Otdeleniye
tekhnicheskikh nauk. Energetika i avtomatika,
no. 6, 1961, 89 - 92

TEXT: The article examines the question of error due to
finite bandwidth in an operational amplifier. The analysis is
based on the Duhamel integral. The analysis is conducted, from
physical considerations, under the following assumptions:
1) the input signal is limited by the linearity limit of the
amplifier;
2) the input signal is continuous and differentiable over the
entire time domain of existence, with the possible exception of
$t = 0$, where the signal may suffer a discontinuity of the first
kind;
3) the logarithmic amplitude-frequency characteristics of the
amplifier consist of a horizontal straight line segment from
$\omega = 0$ to a certain frequency ω_o , whereafter they decrease

Card 1/2

On the bandwidth error S/024/61/000/006/012/019
                               E140/E335

linearly. On the basis of these assumptions expressions are
derived for the dynamic and steady-state error and it is found
that the latter also depends on the frequency characteristics of
the amplifier, decreasing as the bandwidth increases. Numerical
data are given on the figures of merit obtained in this way for
three types of operational amplifier circuit.
There are 1 figure, 1 table and 3 references: 2 Soviet-bloc
and 1 non-Soviet-bloc. The English-language reference
mentioned is: Ref. 2: P.C. Dow, IRE Trans. December, 1957, v.
EC-6, no. 4, p. 255.

SUBMITTED: August 28, 1961

Card 2/2

KOGAN, B. YA.

BERG, A.I., glav. red.; TRAPEZNIKOV, V.A., glav. red.; BERKOVICH, D.M.,
zaml glav. red.; LERNER, A.Ya., doktor tekhn. nauk, prof.,
zam. glav. red.; AVEN, O.I., red.; AGEYKIN, D.I., red.; kand.
tekhn. nauk, dots., red.; AYZERMAN, M.A., red.; VENIKOV, V.A.,
doktor tekhn. nauk, prof., red.; VORONOV, A.A., doktor tekhn.
nauk, prof., red.; GAVRILOV, M.A., doktor tekhn. nauk, prof.,
red.; ZERNOV, D.V., red.; IL'IN, V.A., doktor tekhn. nauk,
prof., red.; KITOV, A.I., kand. tekhn. nauk, red.; KOGAN, B.YA.,
doktor tekhn. nauk, red.; KOSTOUSOV, A.I., red.; KRINITSKIY,
N.A., kand. fiz.-mat. nauk red.; LEVIN,G.A.,prof.red.;
LOZINSKIY, M.G., doktor tekhn. nauk, red.: MOSSIYEVSKIY, V.L.,
red.; MAKSAREV, Yu.Ye., red.; MASLOV,A.A.,dots.,red.;POPKOV,A.A.,red.;
RAKOVSKIY, M.Ye., red.; ROZENBERG, L.D., doktor tekhn.nauk,
prof., red.; SOTSKOV, B.S., red.; TIMOFEYEV, P.V., red.;
USHAKOV, V.B., doktor tekhn. nauk, red.; FEL'DBAUM, A.A.,
doktor tekhn. nauk, prof., red.; FROLOV, V.S., red.;
KHARKEVICH, A.A., red.; KHRAMOY, A.V., kand. tekhn. nauk, red.;
TSYPKIN, Ya.Z., doktor tekhn. nauk, prof., red.; CHELYUSTKIN,
A.B., kand. tekhn. nauk, red.; SHREYDER, Yu.A., kand. fiz.-
mat. nauk, dots., red.; BOCHAROVA, M.D., kand. tekhn.nauk,
starshiy nauchnyy red.; DELONE, N.N., inzh., nauchnyy red.;
BARANOV, V.I., nauchnyy red.; PAVLOVA, T.I., tekhn. red.
(Continued on next card)

BERG, A.I.—— (continued). Card 2.

[Industrial electronics and automation of production proces-
ses]Avtomatizatsiia proizvodstva i promyshlennaia elektronika.
Glav. red. A.I.Berg i V.A.Trapeznikov. Moskva, Gos.nauchn.
izd-vo "Sovetskaia Entsiklopediia." Vol.1. A - I. 1962. 524 p.
                                         (MIRA 15:10)
1. Chlen-korrespondent Akademii nauk SSSR (for Sotskov,
Kharkevich, Zernov, Timofeyev, Popkov).
   (Automatic control)   (Electronic control)

KOGAN, B.Ya., kand. tekhn. nauk, otv. red.; KOTEL'NIKOV, V.A.,
kand. tekhn. nauk, red.; KHRAMOY, A.V., kand. tekhn.nauk,
red.; TSYPKIN, Ya.Z., doktor tekhn. nauk, red.; SHILEYKO,
A.V., insh., red.; SHILEYKO, T.I., red. izd-va; MAKUNI,
Ya.V., tekhn. red.

[Combined (analog - digital) computers]Kombinirovannye vy-
chislitel'nye mashiny; trudy. Moskva, Izd-vo Akad.nauk SSSR,
1962. 294 p.   (MIRA 16:4)

1. Vsesoyuznaya konferentsiya-seminar po teorii i metodam
matematicheskogo modelirovaniya. 2d, Moscow, 1961.
          (Electronic computers)

GULKO, F. B.;   KOGAN, B. Ya.

"Method of Optimum Control with Prediction."

Paper to be presented at the IFAC Congress held in
Basel, Switzerland, 27 Aug to 4 Sep 63

KOGAN, B. Ya., kand. tekhn. nauk; SHILEYKO, A. V.

Theory and methods of mathematical modeling; 3rd thematic
conference. Vest. AN SSSR 33 no.1:121-122 Ja '63.
                                            (MIRA 16:1)

        (Mathematical models)
        (Cybernetics—Congresses)

ACCESSION NR: AT4020715   S/0000/63/000/000/0253/0259

AUTHOR: Benderskiy, V. A.; Kogan, B. Ya.; Gachkovskiy, V. F.; Shlyapnikova, I. A.

TITLE: Electrical and magnetic properties of polymers with conjugated bonds.
I. Polyphenylacetylenes

SOURCE: Karbotsepny*ye vy*sokomolekulyarny*ye soyedineniya (Carbon-chain macro-
molecular compounds); sbornik statey. Moscow, Izd-vo AN SSSR, 1963, 253-259

TOPIC TAGS: polymer, conjugated polymer, polymer electrical property, polymer
magnetic property, polyphenylacetylene, paramagnetic resonance, phenylacetylene
polymerization

ABSTRACT: This work initiates a study of the nature of paramagentic centers, the
mechanisms of conductivity and the relationship between the two characteristics in
conjugated polymers. The electron paramagentic resonance spectra, the electrical
conductivity and the optical centers were investigated in fractions of the product
of thermal polymerization of phenylacetylene (atomic weight 670). The benzene-
and toluene-soluble fractions, with atomic weights ranging from 340 to 1870, were
obtained by successive sedimentation. In the tests conducced in nitrogen at 90-
370 K and, in part, in a $2 \cdot 10^{-5}$ mm vacuum, a 975 kcps IKhF-2 paramagnetic resonance
spectrometer was used. The paramagnetic center concentration and the saturation
Card   1/2

PHASE I BOOK EXPLOITATION   SOV/6430

Kogan, Boris Yakovlevich

Elektronnyye modeliruyushchiye ustroystva i ikh primeneniye dlya issledovaniya
   sistem avtomaticheskogo regulirovaniya (Electronic Analog Computers and
   Their Application in the Analysis of Automatic Control Systems) 2d ed., rev.
   and enl. Moscow, Fizmatgiz, 1963. 510 p. 20,000 copies printed.

Ed.: O. K. Sobolev; Tech. Ed.: Ye. A. Yermakova.

PURPOSE: This book is intended for readers with a theoretical and practical
   knowledge of automatic control and regulation and with the fundamentals of
   electronics.

COVERAGE: The first edition of the book was published in 1957. The present
   edition, the second, differs little from the first as regards general structure
   except for the addition of a new introduction, and a section dealing with am-
   plifiers having parallel amplification chambers (Chapter IV). The book was

Card 1/11

ACCESSION NR. AT5003003
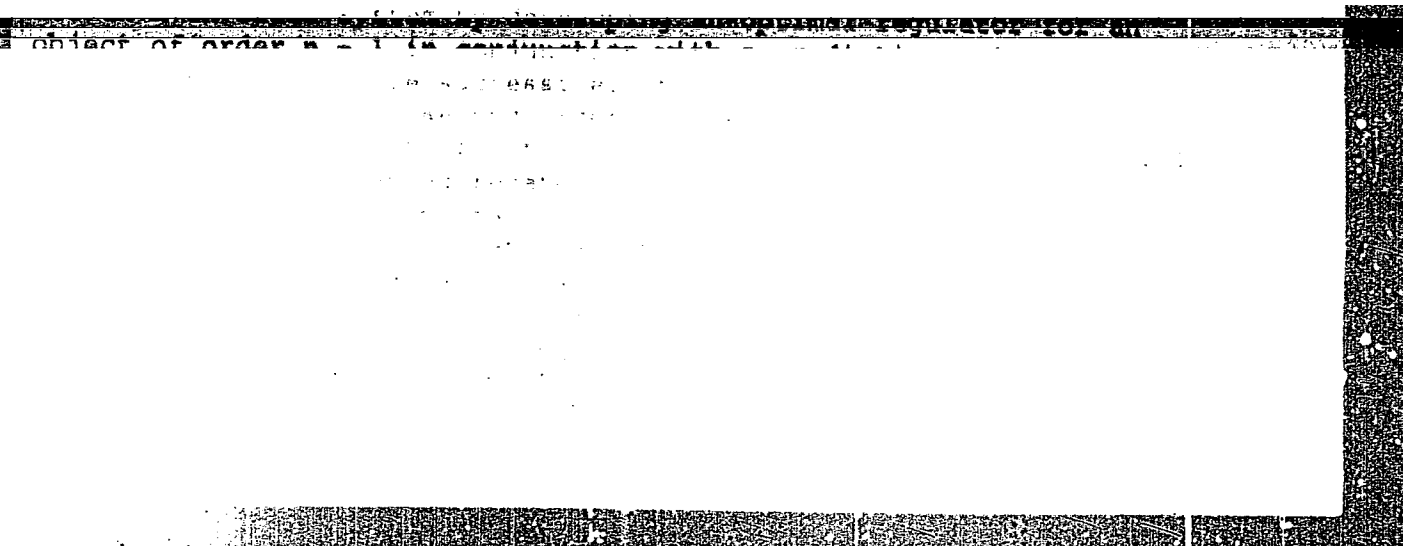
KOGAN, B. Ya.

"On the stability of the operational amplifier with non-linear feedback circuits."

report submitted for 4th Intl Conf, Intl Assn for Analogue Computation, Brighton, UK, 14-18 Sep 64.

BERG,A.I.,glav.red.; TRAPEZNIKOV,V.A.,glav.red.; TSYPKIN, Ya.Z., doktor
tekhn.nauk,prof.,red.; VORONOV,A.A., doktor tekhn.nauk,prof.,red.;
SOTSKOV,B.S., doktor tekhn.nauk,red.; AGEYKIN,D.I., doktor tekhn.
nauk, red.; GAVRILOV,M.A., red.; VENIKOV,V.A., doktor tekhn.nauk,
prof.,red.; CHELYUSTKIN,A.B., doktor tekhn. nauk,red.; PROKOF'YEV,
V.N., doktor tekhn.nauk,prof.,red.; IL'IN,V.A., doktor tekhn.nauk,
prof.,red.; KITOV,A.I.,doktor tekhn.nauk,red.; KRINITSKIY, N.A.,
kand. fiz.-matem.nauk,red.; KOGAN,B.Ya., doktor tekhr.nauk, red.;
USHAKOV,V.B., doktor tekhn.nauk,red.; LERNER,Yu.A., doktor tekhn.
nauk,prof., red.; FEL'DBAUM, A.A.,prof., doktor tekhn.nauk,red.;
SHREYDER,Yu.A., kand. fiz.-mat. nauk,dots.,red.; KHARKEVICH,A.A.,
akad., red.;TIMOFEYEV,P.V., red.; MASLOV,A.A.,dots.,red.; LEVIN,
G.A., prof.,red.; LOZINSKIY,M.G., doktor tekhn.nauk,red.; NETUSHIL,
A.V., doktor tekhn.nauk,prof.,red.; POPKOV,V.I.,red.; ROZENBERG,
L.D.,doktor tekhn.nauk,prof.,red.; LIVSHITS,A.L.,kand.tekhn.nauk,red.

[Automation of production and industrial electronics] Avtomatiza-
tsiia proizvodstva i promyshlennaia elektronika; entsiklopediia
sovremennoi tekhniki. Moskva, Sovetskaia Entsiklopediia. Vol.3.
Pogreshnost' resheniia - Teleizmeritel'naia sistema chastotnaia.
1964. 487 p.   (MIRA 17:10)
1. Chlen-korrespondent AN SSSR (for Sotskov, Gavrilov, Timofeyev,
Popkov).

KOGAN, B.Ya., doktor tekhn. nauk, otv. red.; KOTEL'NIKOV, V.A.,
kand. tekhn. nauk, red.; FEL'DBAUM, A.A., doktor tekhn.
nauk, red.; KHRAMOY, A.V., kand. tekhn. nauk [deceased];
TSYPKIN, Ya.Z., doktor tekhn. nauk, red.; SHILEYKO, A.V.,
kand. tekhn. nauk, red.

[Computer technology in control; collection of the trans-
actions] Vychislitel'naia tekhnika v upravlenii; sbornik
trudov. Moskva, Nauka, 1964.   221 p.   (MIRA 17:12)

1. Vsesoyuznaya konferentsiya seminara po teorii i metodam
matematicheskogo modelirovaniya. 3d, 1962.

NO REF SOV.

ACCESSION NR: AP4041157   S/0020/64/156/004/0897/0900

AUTHORS: Benderskiy, V. A.; Kogan, B.Ya.; Abramov, Yu.Yu.; Kaprinova, L. Ye.

TITLE: Study of the sticking levels in organic photoconductors

SOURCE: AN SSSR. Doklady*, v. 156, no. 4, 1964, 897-900

TOPIC TAGS: organic photoconductor, electronic paramagnetic resonance, electron sticking, sticking level

ABSTRACT: The efficiency of the photoconducting organic materials depends on the drift velocity of the carriers. The latter has been found by A. Bree and W. G. Schneider, (Confer. Elect. Conduct. Organic Solids, 1961) to be affected by the electron sticking which leads to a greater inertia and low quantum yield. In order to eliminate the effect of sticking, the present authors have measured the photoconductivity and the spectra of the electronic paramagnetic resonance at a high intensity of illumination. The material investigated was triphenyl-methane dyes. The measurements were conducted at continuously changing temperature (100 to 350K).

Card 1/2

BERG, A.I., glav. red.; TRAPEZNIKOV, V.A., glav. red.; TSYFKIN,
        Ya.Z., doktor tekhn. nauk, prof., red.; VORONOV A.A.,
        prof., red.; AGEYKIN, D.I., doktor tekhn.nauk red.;GAVRILOV,
        M.A., red.; VENIKOV, V.A., doktor tekhn. nauk, prof., red.;
        SOTSKOV, B.S., red.; CHELYUSTKIN, A.B., doktor tekhn. nauk,
        red.; PROKOF'YEV, V.N., doktor tekhn. nauk, prof., red.;
        IL'IN, V.A., doktor tekhn. nauk, prof., red.; KITOV, A.I.,
        doktor tekhn. nauk, red.; KRINITSKIY, N.A., kand. fiz.·mat.
        nauk, red.; KOGAN, B.Ya., doktor tekhn. nauk, red.; USHAKOV,
        V.B., doktor tekhn. nauk, red.; LERNER, A.Ya., doktor tekhn.
        nauk, prof., red.; FEL'DBAUM, A.A., doktor tekhn. nauk, prof.,
        red.; SHREYDER, Yu.A., kand. fiz.-mat. nauk, red.; KHARKEVICH,
        A.A., akademik, red. [deceased]; TIMOFEYEV, P.V., red.;
        MASLOV, A.A., dots., red.; TRUTKO, A.F., inzh., red.; LEVIN,
        G.A., prof., red.; LOZINSKIY, M.G., doktor tekhn. nauk, red.;
        NETUSHIL, A.V., doktor tekhn. nauk, prof., red.; POPKOV, V.I.,
        red.; ROZENBERG, L.D., doktor tekhn. nauk, prof., red.;
        LIFSHITS, A.L., kand. tekhn. nauk, red.; AVEN, O.I., kand.
        tekhn. nauk, red.; BLANN, O.M.[Blunn, O.M.], red.; BROYDA, V.,
        inzh.,prof.,red.; BREKKL', L.[Brockl,L.] inzh., knad. nauk, red.;
        VAYKHARDT, Kh. [Weichardt, H.], inzh., red.; BOCHAROVA,M.D., kand.
        ·tekhn. nauk, st. nauchn. red.

[Automation of production processes and industrial electronics]
Avtomatizatsiia proizvodstva i promyshlennaia elektronika; entsiklo-
pediia sovremennoi tekhniki. Moskva, Sovetskaia entsiklopediia.
Vol.4. 1965. 543 p.   (MIRA 18:6)

L 38232-66   EWT(1)

ACC NR: AP6010292   SOURCE CODE: UR/0103/66/000/003/0164/0177

AUTHOR: Kogan, B. Ya. (Doctor of technical sciences; Moscow); Chernyshev, M. K.
(Moscow)

ORG: none

TITLE: Delay simulation by operational amplifiers

SOURCE: Avtomatika i telemekhanika, no. 3, 1966, 164-177

TOPIC TAGS: delay circuit, electronic amplifier

ABSTRACT: Three methods for the simulation of variable delay are examined: (1) ap-
proximating the initial transfer function by a transfer function of the appropriate
differential equation with variable coefficients; (2) distributing the initial trans-
fer function into a convergent series resulting in transfer functions without variable
poles; (3) reducing the problem with variable time lag to a problem with constant
shift (or translation) by another independent variable. Method (1) substantially li-
mits the permissible variation speed of the delay. Method (2) does not restrict the
variation speed of the delay, but does involve an amplitude error, in addition to a
phase error. Method (3) is applicable only to a restricted number of problems; it
does not limit the variation speed of the delay to the extent that method (1) does.
Thus, in a system consisting of four operational amplifiers and one multiplier,

UDC: 621.374.5-501.72 : 621.375.3

Card 1/2

L 38232-66

ACC NR: AP6010292

b

$\tau'(t)_{max} \leq 0.7$ sec/sec, when $[\omega\tau(t)]_{max} \leq 7.5$ sec, and the phase error is 2.0%. The application of this method combining linear operations in one operational amplifier and time-pulse multiplier involves an error that does not depend on the value of the input signal. Orig. art. has: 9 figures, 35 formulas.

SUB CODE: 09/   SUBM DATE: 01Nov65/   ORIG REF: 008/   OTH REF: 009

Card 2/2

7

ACC NR: AP6017986   (N)   SOURCE CODE: UR/0413/66/000/010/0086/0086

INVENTOR: Bashilov, I. P.; Bulanzhe, Yu. D.; Dubovik, A. S.; Yerofeyev, V. I.;
Kevlishvili, P. V.; Kobrin, L. V.; Kogan, B. Ya.; Kaz'min, A. I.; Popov, Ye. I.;
Mikhaylov, N. N.; Churbakov, A. I.; Shileyko, A. V.

ORG: None

TITLE: An automatic device for determining acceleration due to gravity on a movable
base. Class 42, No. 181833 (announced by the Institute of Physics of the Earth
imeni O. Yu. Shmidt, AN SSSR (Institut fiziki Zemli AN SSSR))

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 10, 1966, 86

TOPIC TAGS: gravity, electron optics, electronic equipment, gravimeter

ABSTRACT: This Author's Certificate introduces an automatic device for determining
acceleration due to gravity on a movable base, using a strongly damped elastic gravi-
meter system. The installation contains a meter for acceleration due to gravity,
a system of mirrors, lens, light source, two condensers and a slotted prism. Ac-
curacy of measurement is improved, and processing of the resultant information is
automated by using an electron-optical converter which changes angles of turn of a
pendulum to digital code. This converter is made in the form of a code mask with
lenses attached. A prism is mounted behind the lenses with metallic mirrors and
photocells.

Card   1/2   UDC: 531.768.08:528.026

ACC NR: AP6017966
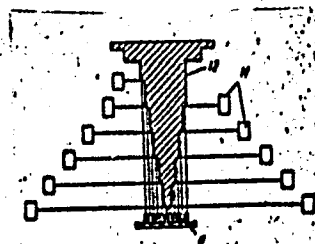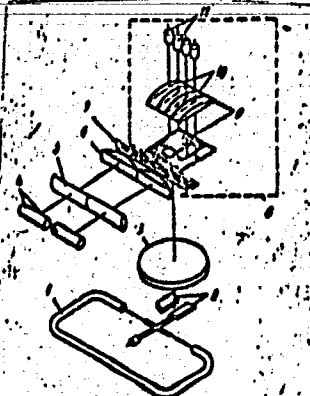
1—accelerometer; 2—system of mirrors; 3—objective lens; 4—light source; 5 and 6—
condensers; 7—slotted prism; 8—electron-optical converter; 9—code mask; 10—
lenses; 11—photocells; 12—prism with metallic mirrors

SUB CODE: 09, 08/ SUBM DATE: 14May64

Card 2/2

/\ ' ' ' ' ' /

529

AUTHOR: Potashnikov, M.M., Candidate of Technical Sciences and
             Kogan, B.E., Engineer (VUKhIN)

TITLE: An investigation of the properties of coal tar for the purpose
             of analyses and calculations of the process of its rectifi-
             cation. (Issledovanie svoystv kamennougol'noy smoly dlya
             analiza i raschetov protsessa ee rektigikatsii.)

ABSTRACT: A method for the investigation of coal tars which permits
             the determination of their potential contents of given
             fractions as well as the physico-chemical characteristics of
             these fractions for the purpose of calculating the tar recti-
             fication process is proposed. It is based on distillation
             of a coal tar distillate (up to 400 $^{\circ}$C) on a laboratory
             column (36 theoretical plates) and collection of 22 fractions
             of approximately equal volume (except the first two which were
             smaller). For each fraction, the following determinations
             were carried out: boiling range, molecular weight and melting
             temperature, moreover, in fractions 1-15 (collected up to
             305 $^{\circ}$C) the content of phenols and bases; in fractions 1-11
             (collected at 188-258 $^{\circ}$C) naphthalene content; in fractions
             10-15 (243-305 $^{\circ}$C) acenaphthene content; in fractions 15-22
             (305-353 $^{\circ}$C) anthracene content; in fractions 16-19 (320-342°C)
             phenanthrene content and in fractions 17-22 (336-353 $^{\circ}$C)

5(3)   SOV/80-32-3-30/43

AUTHORS: Potashnikov, M.M., Kogan, B.Ye.

TITLE: The Preparation of Quinaldic Acid From Bases of Coal Tar
                (Polucheniye khinal'dinovoy kislot? iz osnovaniy kamennougol'...
                noy smoly).

PERIODICAL: Zhurnal prikladnoy khimii, 1959, Vol XXXII, Nr 3, pp 636-641
                (USSR)

ABSTRACT: Quinaldic acid is used for the determination of zinc, copper,
                cadmium, and uranium in large and small quantities and for their
                separation from other metals. An important source are the bases
                of coal tar. In the bases separated from fractions boiling be-
                low 300°C the quinaldine content is 5% $\lfloor$ Ref. 10, 11 $\rfloor$. In the
                heavy fraction the content is 8-10%. It is known that quinal-
                dine interacts with formaldehyde on heating forming a mixture of
                methylol derivatives which are oxidized by nitric acid to quinal-
                dic acid. The formulas for the reactions are given. The ob-
                tained quinaldic acid is 99.6-99.9% pure after a single recrystal-
Card 1/2   lization with a melting temperature of 155.5-156.5°C.

SCV/60-32-3-30/43

The Preparation of Quinaldic Acid From Bases of Coal Tar

There are 2 tables and 14 references, 11 of which are Soviet and 3 German.

SUBMITTED: July 8, 1957

Card 2/2

S/068/60/000/010/002/002/XX
E071/E433

AUTHORS: Potashnikov, M.M. and Kogan, B.Ye.

TITLE: Production of Pure Quinaldine from Coal Tar Bases

PERIODICAL: Koks i khimiya, 1960, No.10, pp.49-51

TEXT: The authors investigated the possibility of separating
quinaldine from its mixture with other quinoline bases in the form
of hydrochloride.   As a starting raw material, a narrow fraction of
coal tar bases was used.   It had the following properties:
specific gravity 1.080, boiling range 243 - 246°C and contained
30% of quinaldine and about 70% of quinoline and isoquinoline.
The experimental procedure consisted of passing a calculated
amount of dry hydrogen chloride through the starting material on
stirring (the apparatus is shown in Fig.1),   After the end of the
precipitation reaction, the reaction mixture was heated to 120°C
whereupon the precipitated quinaldine hydrochloride was redissolved
and then reprecipitated on cooling to 20°C.   The precipitate was
filtered off on a Beuchner funnel and washed with benzene (double
amount of the starting material).   After drying at 80°C the
substance obtained melted at 218 to 225°C.   The degree of recovery
of quinaldine was 76%.   The experimental results are given in
Card 1/2

S/068/60/000/010/002/002/XX
E071/E433

Production of Pure Quinaldine from Coal Tar Bases

Table 1.   The separation of quinaldine from its hydrochloride was done by the decomposition with a 20% solution of sodium hydroxide (up to the appearance of alkali reaction with phenolphthalein). The bases were separated from the aqueous layer, dried with solid alkali and redistilled.   The residual quinaldine in the aqueous layer was extracted with benzene.   The quinaldine obtained (Table 2) satisfied the requirements of ВТУМХП 2893-51 (VTUMKhP 2893-51) standard for reagent quinaldine.   In order to obtain quinaldine of a higher purity, the separated quinaldine hydrochloride was recrystallized from 95% ethyl alcohol (Table 3).   On the basis of the above experimental data a technological scheme for the production of quinaldine is proposed (Fig.2).   It differs from the laboratory procedure in that, after the decomposition of quinaldine hydrochloride with alkali, quinaldine is extracted with benzene and the solvent removed by distillation in vacuo.   There are 2 figures, 3 tables and 3 Soviet references.

ASSOCIATION: VUKhIN

Card 2/2

S/068/61/000/012/001/002
E071/E435

AUTHOR: Kogan, B.Ye.

TITLE: Production of pure lepidine from coal tar bases

PERIODICAL: Koks i khimiya, no.12, 1961, 48-51

TEXT: A laboratory investigation of the separation of lepidine
from coal tar bases is described.   Bases separated from the
absorption (creosote) oil fraction of coal tar from the
Nizhne-Tagil'skiy metallurgicheskiy kombinat (Nizhne-Tagil'
Metallurgical Combine) were used as a starting raw material
(sp.gr. 1.100; H_2O 8.6%;   the content of bases 87.5%;
boiling characteristics: 10% 243°C; 50% 254°C; 90% 281°C).
By double rectification, a narrow lepidine fraction, boiling
within 260 to 266°C, was obtained.   The yield being 8% on heavy
bases. . The fraction was dissolved in benzene (bases to benzene
1:2) and the bases were extracted with 10 to 20% sulphuric acid,
whereupon indole remains in the benzene solution.   The aqueous
solution of sulphates was decomposed with alkali and the
separated bases were redistilled.   The difference in the
solubility of acid sulphates of lepidine and of accompanying bases
in methyl and ethyl alcohols was used for the separation of
Card 1/4

S/068/61/000/012/001/002
Production of pure lepidine ...   E071/E435

to be suitable for small scale production of lepidine. The
experimental results are summarized in Table 2.   There are
1 figure, 3 tables and 6 references: 4 Soviet-bloc and 2 non-
Soviet-bloc.   The reference to an English language publication
reads as follows: Ref.1: H.N.Nisbet, A.M.Prude. Journal of the
Institute of Fuel, 1954, 27, no.157, 58-66.

ASSOCIATION: VUKhIN

Card 3/4

PRIVALOV, V.Ye.; KOGAN, B.Ye.; NOVIKOV, V.N.

Distillation of heavy pyridine bases. Koks i khim. no.12:46-49
'62.
(MIRA 16:1)

1. Vostochnyy uglekhimicheskiy institut.
(Pyridine bases)

KOGAN, B.Ye.

Recovery of pure quinoline. Koks i khim. no.9:45-47 '63.

(MIRA 16:9)

1. Vostochnyy uglekhimicheskiy institut.

(Quinoline)

KOGAN, B. Yu.

Unfortunate comparison. Fis. v shkole 13 no.4:87 Jl-Ag '53.   (MLRA 6:6)
(Electric power)

KOGAN, B.Yu. (Moscow)

On an incorrect illustration. Fiz.v shkole 14 no.1:81 Ja-F '54.

(MLRA 7:1)

(Physics--Text-books) (Sokolov, I.I.)

KOGAN, B.Yu.

Problems in mechanics. Fiz. v shkole 14 no.3:73-74 My-Je '54.
(MLRA 7:7)

1. 4-ya shkola rabochey molodezhi, g. Moskva.
(Mechanics--Problems, exercises, etc.)

KOGAN, B.Yu.

A few physics problems. Fiz.v shkole 15 no.3:74-75 My-Je '55.
(MLRA 8:6)

1. 4-ya shkola rabochey molodezhi (g.Moskva)
(Physics--Problems, exercises, etc.)

KOGAN,B.Yu. (Moscow)

Some cases illustrating the applicability of equations of motion.
Fiz. v shkole 15 no.4:36-37 Jl-Ag'55.   (MIRA 8:10)
              (Motion--Study and teaching)

KOGAN, B.Yu. (Moskva)

    Problems for extracurricular work. Fiz, v shkole 23 no.5:90-
93 S-O '63.   (MIRA 17:1)

KOGAN, B.Yu. (Moskva)

An extremum property of constraints. Prikl. mat. i mekh. 28 no.5:
921-922 S-O '64.   (MIRA 17:11)

KOGAN, Boris Yur'yevich; RAYSKAYA, N.A., red.

[One hundred problems in physics] Sto zadach po fizike.
Moskva, Nauka, 1965.   60 p.   (MIRA 18:7)

KOGAN, B. Z., and TRAPEZNIKOV, V. A.

"Electronic Models and Their Application in the Development and Design of
an Automatic Regulation System." A paper given at the conference on Control
Technology, Modern Theory and its Applications, Heidelberg, 25-29 Sept 1956.

GUMNITSKIY, T.; RUMYANTSEV, L.; KOGAN, D.

     Economic council enterprises increase production of house-
hold goods. Sov.torg. no.6:18-21 Je '58.
                                  (MIRA 13:2)

         (Household appliances)

KOGAN, D.; RUMYANTSEV, L.

New contacts between wholesale trade and industry. Sov. torg.
no.10:7-10 O '58.   (MIRA 11:10)
        (Wholesale trade)   (Russia--Industries)

Ñ OG A N, Ð

KOGAN, D.

Raschet parashiutnogo pryzhka. (Samolet, 1936, no. 3, p. 35, diagr.)
Title tr.: Calculation of parachute jump performance.

TL504.S25 1936

SO: Aeronautical Sciences and Aviation in the Soviet Union, Library of Congress, 1955.

KOGAN, David Abramovich; SHILINIS, Yu.A., red.

[Homeopathy and modern medicine] Gomeopatiia i sovremen-
naia meditsina. Moskva, Meditsina, 1964. 216 p.
(MIRA 17:12)

KOGAN, D, A,

Kogan, D. A., Grishina, K.F. and Frolova, A. Yu. "The treatment of ulcers and sluggish wounds by iontophoresis, ascorbic acid, and Roentgen ultraviolet rays," Sbornik trudov Nauch.-issled. in-ta ortopedii, travmatologii i protezirovaniya (M-vo zdravookhraneniya Uz SSR), Vol. I, 1948, p. 149-56

SO: U-4934, 29 Oct. 53, (Letopis 'Zhurval 'nykh Stately, No. 16, 1949).

KOGAN, D.A.;KONSTANTINOVA, O.N.;BABUSHKINA, V.G.

Pancreatic function in hypertension. Klin. med., Moskva 30 no.2:77
Feb 1952.   (CLML 22:1)

1. Professor for Kogan. 2. Of the Department of Physiotherapy, Middle-
Asiatic Institute for the Advanced Training of Physicians (Director --
D. B. Pulatov), Tashkent.

USSR / Microbiology. General Microbiology.   Effect of   F
        External Agents. Disinfection.

Abs Jour: Ref Zhur-Biol.; No 2, 1959, 5421.

Author   : Kogan, D. A.; Kel'man, Z. N.
Inst   : Uzbek Institute of Orthopedics, Traumatology
           and Prosthetics.
Title   : Effect of Ultraviolet Radiation of Bactericidal
           Lamp on Pathogenic Microflora of Wounds.

Orig Pub: Tr. Uzb. in-1. in-ta ortopedii, travmatol, i
          protezir., 1955, 6, 89-91.

Abstract: The effect of domestic ultraviolet bactericidal
          lamp, emitting only ultraviolet rays radiation
          with a wave length of 263.5 m/₵ on Proteus, Bac-
          illus pyocyaneus, Escherichia coli, Staphylococc-
          ous aureus, and Staphylococcus albus was studied.

Card 1/2

USSR / Microbiology. General Microbiology.   Effect of   F
        External Agents. Disinfection.

Abs Jour: Ref Zhur-Biol., No 2, 1959, 5421.

Abstract: The optimal bactericidal dosage was found to
          be an exposure for 30 min. at a distance of
          5 cm from the lamp.

Card 2/2

KOGAN, D.A., professor; PILOVITSKAYA, V.N., mladshiy nauchnyy sotrudnik;
           SAYAPINA, L.I.

Antitoxic hepatic function in fractures of the long bones as affected
by some physical factors. Ortop., travm. i protez. 17 no.3:68 My-Je '56
                                        (MIRA 9:12)

1. Iz Uzbekskogo nauchno-issledovatel'skogo instituta ortopedii,
travmatologii i protesirovaniya (dir. - kandidat meditsinskikh nauk
A.Sh.Shakirov)
           (LIVER)   (FRACTURES)   (PHYSICAL THERAPY)

KOGAN, D.A., prof.; KURZAYEVA, V.Ya.; YUSUPOV, T.Yu.

Water and salt metabolism in patients with fractures of the
long bones. Med.zhur.Uzb. no.11:42-45 N '58.   (MIRA 13:6)
        (FRACTURES)   (SALT IN THE BODY)

USSR/Human and Animal Physiology - (Normal and Pathological)   T
            Physiology of the Skeleton.

Abs Jour   : Ref Zhur Biol., No 4, 1959, 17853

Author   : Kogan, D.A., Pilovitskaya, B.N.

Inst   : Uzbek Scientific Research Institute of Traumatology and
              Orthopedics

Title   : Creatin-Creatinin Metabolism in Patients with Fractures
              of Long Bones and the Influence of It on Some Physical
              Factors.

Orig Pub   : Tr. Uzb. n.-i. in-ta travmatol. i ortopedii, 1957(1958),
              7, 49-53

Abstract   : No abstract.

Card 1/1

- 74 -

KOGAN, David Aronovich

[Poliomyelitis]Poliomielit. Tashkent, Gos.izd-vo Uzbekskoi
SSR, 1956.   74 p.   (MIRA 16:2)
                        (POLIOMYELITIS)

KOGAN, D.A., kand. med. nauk (Leningrad)

Review of the book "Diseases of the liver and bile ducts";
transactions of the Leningrad Medical Institute for Sanita-
tion and Hygiene. Klin. med. 41 no.6:162-164 Je '63.
(MIRA 17:1)

KOGAN, D.A.

Convolution of infinite matrices and its use in improving the
summability of funct' nal series. Mat. zap. Ural. mat. ob-va
UrGu 4 no.2:80-90 '63   (MIRA 17:8)

SHISHLYAKOV, A.V., kand.tekhn.nauk; KOGAN, D.A.; ANTCNOVA, L.N.

Single-track automatic block system without main track signal
lights and with unlimited pulse track circuits. Avtom., telem.
i sviaz' 9 no.5:20-24 My '65.   (MIRA 18:5)

1. Vedushchiy konstruktorskogo byuro Glavnogo upravleniya
signalizatsii i svyazi Ministerstva putey soobshcheniya (for
Kogan). 2. Starshiy inzh. konstruktorskogo byuro Glavnogo
upravleniya signalizatsii i svyazi Ministerstva putey soobsh-
cheniya (for Antonova).

KOGAN, David Abramovich; SHILINIS, Yu.A., red.

[Homeopathy and modern medicine] Gomeopatiia i sovremennaia meditsina. Moskva, Meditsina, 1964.   216 p.
(MIRA 18:9)

S/081/61/000/019/071/085
B117/B110

AUTHORS: Shevelev, F. A., Kogan, D. F., Vanyakin, D. M.

TITLE: Application of tubes made of high-density polyethylene

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 19, 1961, 479, abstract
                19.928 (Vodosnabzh, i san. tekhn., no. 3, 1961, 13-17)

TEXT: Production methods of polyethylene tubes, their properties and fields
of application are described. Methods for connecting polyethylene tubes
are given and an assortment of pressure tubes made of high-density poly-
ethylene is listed. [Abstracter's note: Complete translation.]

Card 1/1

KOGAN, D.I.; RYCHAGOV, V.A.

Studying the effect of certain reagents on the flotation properties
of carbonatite rock minerals. Izv. vys.ucheb.zav.; tsvet. met. 6
no.3:51-57 '63.   (MIRA 16:9)

1. Irkutskiy gosudarstvennyy nauchno-issledovatel'skiy institut
redkikh metallov.
            (Flotation) (Carbonatites)

KOGAN, D.I., (and ,och Sci---(diss) "On the problem of the behavior (study of the)

of varieties of sinc blende in the flotation of lead-zinc ores"

Mos, 1958. 18 pp (Min of Higher Education USSR. Mos Inst of Non-Ferrous

Motals and Gold im M.I.Kalinin. Chair of *Concentration* of Minerals"),

150 copies (KL,48-58, 104)

—42 —

KOGAN, D.I.

Investigating the effect of iron on lattice parameters of sphalerite
from certain deposits in the Soviet Union. Izv.vys. ucheb. zav.; tsvet.
met. no.3: 49-53   ' 58.   (MIRA 11:11)

1. Moskovskiy institut tsvetnykh metallov i zolota. Kafedra oboga-
shcheniya poleznykh iskopayemykh.
          (Sphalerite) (Crystal lattices)

SOV/149-58-4-7/26

AUTHORS: Kogan, D.I., and Yasyukevich, S. M.

TITLE: Study of the Action of Flotation Reagents on the
            Varieties of Zinc Blendes by the Potential Measurement
            Method (Izucheniye deystviya flotatsionnykh reagentov
            na raznovidnosti tsinkovykh obmanok metodom izmereniya
            potentsiala)

PERIODICAL: Izvestiya Vysshikh Uchebnykh Zavedeniy, Tsvetnaya
            Metallurgiya, 1958, Nr 4, pp 47-55 (USSR)

ABSTRACT: The surface changes taking place on the surfaces of
            eight varieties of zinc blendes (48.30 - 62.42% Zn)
            under the action of flotation reagents were studied.
            As in some other researches (refs.1-4) the method of
            measuring the electro-chemical potential was used.
            One end of the cylindrical specimen was electrolytically
            coated with copper to which a lead was soldered; the
            specimen was fixed in a glass tube and covered with
            paraffin except for the uncoppered end. This electrode
            was placed in circuit with a saturated calomel
Card 1/3   electrode, the emf being found with the aid of a high-
            resistance potentiometer. The authors present their

Study of the Action of Flotation Reagents on the Varieties of   SOV/149-58-4-7/26
      Zinc Blendes by the Potential Measurement Method

solution having pH values over 10 the shift of emf
produced by adding sodium cyanide becomes very small.
There are 9 figures, 1 table and 4 Soviet references.

ASSOCIATION: Moskovskiy institut tsvetnykh metallov i zolota.
Kafedra obogashcheniya poleznykh iskopayemykh (Moscow
Institute of Non-Ferrous Metals and Gold. Chair of
Ore Beneficiation)

SUBMITTED: 30th December 1957.

Card 3/3

SOV/136-58-11-3/21

AUTHORS: Kogan, D.I.
             Yasyukevich, S.M.

TITLE: On the Mechanism of the Action of the Zinc Cyanide
             Complex (O mekhanizme deystviya kompleksa tsianida
             tsinka)

PERIODICAL: Tsvetnyye Metally, 1958, Nr 11, pp 17-19 (USSR)

ABSTRACT: $Na_2Zn(CN)_4$ is widely used for mineral depression but
             there is contradictory information in the literature
             (refs.2-5) on the mechanism of the action of the
             anion, $Zn(CN)_{2-4}$. The authors describe experiments
             in which the sorption of the substance on zinc-sulphide
             minerals was studied using radioactive Zn^{65} or $C14$
             as the tracers, two parallel series being carried out.
             No sorption of the complex anion on the mineral was
             found and the authors attribute its depressing
             action to its disruption by sulphur ions (appearing
             on account of the solution of the mineral) to give
             a hydrophylic zinc-sulphide precipitate and free
             cyanide ions in solution. The observed stronger
Card 1/2   action of the complex on ferruginous zinc blendes

SOV/136-58-11-3/21

On the Mechanism of the Action of the Zinc Cyanide Complex

is due to the easier passage of sulphur into solution (compared with low-iron blendes) and, possibly, the formation of a ferricyanide complex. There are 2 tables and 6 references of which 5 are Soviet and 1 English.

ASSOCIATION: Mintsvetmetzoloto

Card 2/2

KOGAN, D.I.; SELYUGINA, R.A.

Repairing excavators by replacing units. Transp.stroi. 9
no.12:22-24 D '59.   (MIRA 13:5)

1. Nachal'nik TSentral'noy mashinoprokatnoy bazy (for Kogan).
2. Zamestitel' nachal'nika otdela ekspluatatsii mekhanizma
Glavstroymekhanizatsii (for Selyugina).
   (Excavating machinery--Maintenance and repair)

KOGAN, D.I.

Progressive practices in using automotive transportation.
Transp.stroi. 10 no.3:40-41 Mr '60.   (MIRA 13:6)

1. Nachal'nik Tsentral'noy mashinoprokatnoy bazy Glavstroymekhani-
zatsii.
            (Transportation, Automotive)

YEVDOKIMOV, B.Ye.; KOGAN, D.I.

Method of calculating the economic efficiency of new drilling
equipment. Razved.i okh.nedr 28 no.4:25-30 Ap '62.

(MIRA 15:4)

1. TSentral'noye konstruktorskoye byuro Ministerstva geologii
i okhrany nedr SSSR.

(Boring machinery)

GRAF, L.E.; KOGAN, D.I.; NOVOZHILOV, V.I.

Hydraulic drill. Gor.zhur. no.1:76 Ja '63. (MIRA 16:1)
(Boring machinery)

GRAF, L.E.; KOGAN, D.I.

Rock-breaking tool for drilling with hydraulic hammers. Trudy
MGRI 39:121-127 '63.   (MIRA 16:10)

GRAF, L.E.; KOGAN, D.I.

The K26M-6 bit for drilling test wells. Biul.tekh.-ekon.inform.
Gos.nauch.-issl.inst.nauch.1 tekh.inform. no.9:12-13 '63.
(MIRA 16:10)

KOGAN, D.I.

Rock-breaking tool with a hydraulic striker-head for combination drilling. Razved. i okh. nedr 27 no.1:18-23 Ja '61. (MIRA 17:2)

1. TSentral'noye konstruktorskoye byuro Ministerstva geologii i okhrany nedr SSSR.

LITVINOV, N.N.; GRAF, L.E.; KOGAN, D.I.; MAZURENKO, V.V.

Annular drill bit. Gor. zhur. no.3:69 Mr '63.   (MIRA 16:4)

KOGAN, D.I.; BERESTEN', L.K.

Introducing the OPT.2 pit for hydraulic percussion drilling in hard
rocks. Biul.tekh.-ekon.inform.Gos.nauch.-issl.inst.nauch.i tekh.inform.
17 no.7:14-15 Jl '64.

(MIRA 17:10)